

The Setting

In October 2013, Beijing's Tsinghua University played host to a landmark roundtable discussion between the UK and China about the future of online education. Organised by the British Council China, the roundtable brought together several leading experts and practitioners from both nations to share research and insights, and chart each other's progress towards a new frontier of e-learning.

Background

For some they represent the future of education, yet for most students, teachers and administrators it is still just a buzzword - and a strange one at that. The 'MOOC', or 'massive online open course', is a nascent development in distance learning that brings together multimedia-rich course materials, online forums that allow peer review and interaction, and in some cases, automated feedback and assessment, and then applies that to the 'Wikipedia' spirit of free and open access for all.

MOOCs typically offer free online courses with no entry requirements, although North American organizations like Udacity and Coursera have grown rapidly into commercial MOOC operators. Earlier this year Coursera launched its first entirely MOOC-based course in association with a US university, costing significantly less than the normal tuition fee.

A number of not-for-profit online learning initiatives include edX, founded by Harvard and MIT in 2012 and comprising 29 leading global institutions. edX is building an open source educational platform designed to deliver courses both online and on campus, while simultaneously gathering research on how students learn.

In China, Tsinghua University is at the forefront of MOOC research and development. In May this year the university joined edX and has since began to develop its own online course platform, XuetangX.

In the UK, HE institutions are eager to climb aboard the MOOC bandwagon. Open University launched Futurelearn in 2012, a MOOC platform that has been adopted by a number of UK universities. Institutions like the University of Leeds have already created 'mini' MOOCs, short courses designed to give students around the world a glimpse of what studying at Leeds might be like.

The Big Picture

"MOOCs", according to Mister Qu Zhenyuan, Director of the Chinese Higher Education Association, "are bringing about fundamental changes in education around the world." The opening speaker at the roundtable, Mister Qu, formerly a university professor and president, professed to understand the vital importance of technology in education. "In China, MOOCs have received tremendous attention from Chinese institutions like Peking University and Tsinghua University, although so far only Tsinghua is actively involved in creating MOOCs." Tsinghua University's Director of Teaching Affairs, Professor Zheng Li picked up on the "hot topic" of MOOCs, commenting on the pitfalls of not being open to technological advances in education. "We are a very successful university in China, so if we change the way we work and teach, maybe this will make us worse, not better!" joked Zheng, before adding: "if we don't adopt these innovations, we could face serious problems in the future."

But when is the right time to start with MOOCs? Do we start today? What are the consequences if we don't? Predicting future developments in e-learning is incredibly contentious, noted Zhang Jing, British Council China's Director of Higher Education. "That's why these discussions are so vital today. What will education institutions be like in ten years time?"

XuetangX: The MOOCs Platform for China

Professor Sun Maosong, Dean of the Computer Department at Tsinghua University, presented to the assembled roundtable a preview of XuetangX, the first MOOCs platform in China, developed by his own department. Based on OpenEdX, the open source initiative of edX, the XuetangX portal has “new functions and new innovations” according to Professor Sun. These innovations include a course search facility, peer-to-peer support, a visual formula editor and automatic assessment systems for students, for example the instant grading of computer programming assignments. Professor Sun also showed how the system could be used to grade liberal arts students, using an example of a Chinese couplet in poetry. The computer generates the first line, and students write a corresponding line according to established literary form. “The system is smart because it can increase the difficulty by degrees as the student progresses.” XuetangX has been designed to be a fully open system aimed at everyone. So far eight courses have been loaded up on to the system, with more courses in the pipeline. “Early enrolment figures have been very encouraging,” enthused Professor Sun, outlining the vision for XuetangX to be “the largest first-rate Chinese MOOCs platform serving the education of the whole nation.” Perhaps most remarkable of all – especially to the UK representatives present – was the sheer pace of Tsinghua’s adoption and development of the new technological portal. From the date the XuetangX R&D team was established to its official launch (October 10 2013) was a time span of around four months.

“It’s amazing how quickly you’ve developed this system,” commented Doctor Neil Morris, Director of Digital Learning at the University of Leeds, who wished to know, “would Tsinghua consider MOOCs courses as entry qualifications into the university?”

Tsinghua University’s Director of Teaching Affairs, Professor Zheng Li observed that this is as much a question of government policy as it is a technological issue, although China’s elite 985 universities already have an agreement that students can select online courses from other universities with the possibility of credit transfer.

The issue of involving industry with MOOCs and e-learning was raised by Professor Steven Furnell, head of the School of Computing and Mathematics at Plymouth University. “With industry, MOOCs are a potential revenue model because businesses are willing to pay for staff training systems.”

Fiona Harvey, Education Development Manager at the University of Southampton, posited the value of social media as a useful way to receive feedback on MOOCs. “In Southampton we are using Weibo with our Chinese students because our MOOCs are starting in November,” explained Fiona, also the Chair of the Association of Learning Technology (ALT), noting that students are already forming communities for themselves. “The use of alumnus to help feedback on MOOCs can also be very helpful for the student experience,” suggested Professor Harvey.

Quality Assurance

Because MOOCs have so far posted such low student completion rates, the UK’s Quality Assurance Agency for Higher Education (QAA) didn’t initially regulate them, but this is changing, according to Fiona Harvey. Her advice to her Chinese colleagues was clear: make sure your MOOCs follow the same standards in quality as your on-campus provision. “It’s your reputation that is being broadcast to the world,” noted Fiona, “and because by their nature MOOCs are more open, they are more open to scrutiny.”

Addressing the issue of high dropout rates, it was agreed that MOOCs should be developed in such a way that the courses keep learners engaged all the way through. Professor Morris suggested that broadcast MOOCs should always attempt to mix video lectures with animations and other features to keep the content rich and engaging, while Professor Steven Gomez, the Academic Lead for Online Learning with the Higher Education Academy (HEA) advocated the use of ‘reward badges’ and other ‘gamification’ elements to help learners stick to the course all the way to the end.

Professor Zheng Li expressed a commitment to ensuring the highest quality of MOOCs at Tsinghua University. "To decide which MOOCs to develop we select our best professors and highest quality courses. For us it's about the quality of the teacher, not the appeal of the subject."

The Analytics of MOOCs

Technology is not just a tool for teaching, but for finding out how students study and learn, according to Professor Stephen Gomez. "Knowing how students use MOOCs and how they interact with them is very important," expressed Professor Gomez, who wished to know if the data gleaned from the XuetangX platform would be open to the academic community. Professor Sun estimated that within half a year these user analytics might be ready to share and dissect. Han Xibin, Deputy Director of the Education Research Institute at Tsinghua University gave a presentation on 'E-learning and the Digital Campus', detailing the findings by his 80-strong research team on how e-learning fares versus traditional classroom learning, by analysing the online habits of students and teachers, and how teaching method affects learning. His findings – that teachers should design their online learning courses carefully and elaborately to maintain student engagement – confirmed what University of Leeds' Professor Morris had thought for a long time: that putting in extra effort to create great online resources and helping students as much as possible during their e-learning really does pay off.

In fact, noted Professor Harvey, US studies have shown that some online students do better than their traditional learning counterparts precisely because of the richness of resources available to them.

MOOCs and Course Credit

The issue of MOOCs conferring course credit to students is perhaps the most critical of all, and how soon this might happen on any scale in either China or the UK is still uncertain. "One MOOC is now offering credit in the UK," revealed Fiona Harvey, "and we are all watching it carefully."

A number of Chinese students were watching the roundtable, and when asked their opinion on whether they would try a MOOC, this issue of course credit was a sticking point for some. "While we love to learn, we are busy with our own courses, so for me I would like it that they offer some credit," said a female Tsinghua student.

"UK students have the same feeling," admitted Fiona Harvey. "Although you don't invest money in these courses you invest time, and time is valuable. But we are looking closely at how MOOCs can offer credit in the future."

The Future

Although the regulation and quality assurance of MOOCs will ultimately determine whether they can confer course credit, most are in agreement that MOOCs will have a drastic impact on teaching practices.

"At Leeds we have 150 academics wanting to develop MOOCs in the next two years," commented Professor Morris, whose 'mini' MOOCs are changing the attitudes of many of his academic colleagues with regard to the sweeping practical benefits of the technology. For the XuetangX platform there's a lot of work still to do, according to Professor Sun Maosong. "Our task is to continue to develop courses. We need to build a huge knowledge base, virtual lab technologies and much more. It's very complicated!"

Han Xibin was interested to know whether MOOCs were already a well-known concept in the UK. No, was the crux of Professor Morris' answer, who admitted that most people still hadn't heard of them, and staff are not yet encouraging students to take them. "We are all excited about MOOCs but there's still a whole lot of people who don't know about them yet."

Notes:

Lifelong learning

Connectivist MOOCs rely on peer review and group collaboration; the course will take its own trajectory.